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Ref # 10954

PROJECT EVALUATION

F-12-R-10 - Western Montana Fishery Study

Job. No.3 - Aeration Evaluation

Aeration units were installed and operated at Georgetown and Browns Lake to assess the ability of these systems to increase the dissolved oxygen concentration during the winter months. Dissolved oxygen concentration remained adequate through the winter at both the control lakes (Echo and Upsata) and lakes in which the aeration units were operated. No significant changes in dissolved oxygen concentrations were evident from oxygen samples collected near the air line or at sampling stations in other parts of the lake. Water temperatures were also recorded at the time oxygen samples were taken to determine if aeration units had a cooling effect in the lakes. No general cooling effect was noticeable at either lake.

To date, the primary benefits derived from aeration units has been an earlier spring ice breakup. In 1963 Georgetown Lake broke up on May 19th, approximately two weeks earlier than the usual ice break. The ice went off Browns Lake April 14th four days earlier than it had at Upsata Lake (1963).

The winters of 1962-63 and 1963-64 have been comparatively mild winters. The aeration unit should be tested under more severe winter ice and snow conditions before a final evaluation be made of their ability to prevent winter fish kills.

This project will continue for another year.